ABSTRACT

It is aimed at providing an analysis method of impurities (color centers) in fluoride, capable of extremely simply analyzing impurities (color centers) in fluoride. It is also aimed at providing an analysis method of impurities (color centers) in fluoride, for enabling evaluation of an effect by addition of a scavenger, before obtainment of a final single crystal.

There are detected absorption peaks and the like of formed color centers and the like, by irradiating X-rays to an obtained fused material, and by measuring transmittances thereof before and after the irradiation. Based thereon, there are optimized melt conditions of a scavenger and the like, thereby enabling growth of a high purity molten raw material suitable for growth of a single crystal less in X-ray damage.